Name _____ Date _____

1.4 Practice A

In Exercises 1 and 2, solve the system using the elimination method.

1. $x - 6y + 2z = 5$
   $2x - 3y + z = 4$
   $3x + 4y - z = -2$

2. $x + y - z = -2$
   $2x - y + z = 8$
   $-x + 2y + 2z = 10$

3. Describe and correct the error in the first step of solving the system of linear equations.

$5x + 3y - z = 15$
$-x + 2y + 3z = 10$
$3x - 4y + 3z = 8$

✗
$5x + 3y - z = 15$
$-5x + 10y + 15z = 10$
$13y + 14z = 25$

In Exercises 4 and 5, solve the system using the elimination method.

4. $x + 4y - 3z = 1$
   $3x + 12y - 9z = 8$
   $2x + 4y - 4z = -12$

5. $x + y - z = 2$
   $x - y - z = 2$
   $3x + y - 3z = 6$

6. Three bouquets of flowers are ordered at a florist. Three roses, 2 carnations, and 1 tulip cost \$14, 6 roses, 2 carnations, and 6 tulips cost \$38, and 1 rose, 12 carnations, and 1 tulip cost \$18. How much does each item cost?

In Exercises 7 and 8, solve the system of linear equations using the substitution method.

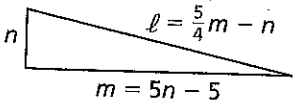
7. $y = -3$
   $2x + y = 5$
   $x - 2y + z = 6$

8. $x - y = 5$
   $-x + 4y + 2z = 3$
   $-x + 3y - 5z = -6$

9. A triangle has a perimeter of 90 centimeters.

   a. Write and use a linear system to determine the lengths of sides ℓ, m, and n.

   b. Is the triangle a right triangle? Explain.



Name_____ Date_____

1.4 Practice B

In Exercises 1 and 2, solve the system using the elimination method.

1. $3x - y + z = -1$
$3x + 2y - 5z = -16$
$3x + 3y + 2z = 6$

2. $4x + 3y - 5z = -9$
$6x + 6y - 3z = 6$
$3x - 3y + 4z = 19$

3. Describe and correct the error in the first step of solving the system of linear equations.

$5x + 3y - z = 15$
$-x + 2y + 3z = 10$
$3x - 4y + 3z = 8$

$$\begin{array}{r} -15x - 9y - 3z = 45 \\ 3x - 4y + 3z = 8 \\ \hline -12 - 13y = 53 \end{array}$$

In Exercises 4 and 5, solve the system using the elimination method.

4. $x - y - z = 5$
$4x - 4y - 4z = 15$
$3x - y - 4z = -2$

5. $-x + y + z = 3$
$x + y + 3z = 5$
$3y + 6z = 12$

In Exercises 6 and 7, solve the system of linear equations using the substitution method.

6. $2x - y = 6$
$4x - 3y - 2z = 14$
$-x + 2y - 3z = 12$

7. $6x + 3y - 9z = 10$
$-2x - y + 3z = 3$
$x - 2y - z = 1$

8. Your friend claims that she has a bag of 30 coins containing nickels, dimes, and quarters. The total value of the 30 coins is \$3. There are twice as many nickels as there are dimes. Is your friend correct? Explain your reasoning.

9. Each equation in this system represents a line.

$x - 2y - 3 = 0$
$2x + y + 1 = 0$
$3x + 4y + 5 = 0$

a. Solve the system of linear equations using either the elimination method or the substitution method.

b. Do the lines intersect at a point? Explain.